

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. – 21. (Cancelled).

22. (Previously Presented) A plug-in electronic module for plugging into a holding structure having a coupling partner with an electrical contact, the electronic module comprising:
a housing;

an electronic component configured in said housing;

at least one external electrical contact connected to said electronic component, said external contact being fixed relative to said housing, said external electrical contact configured for contacting the electrical contact on the coupling partner during a plug-in operation in which the electronic module is plugged into the holding structure;
and

a mechanical protective device for protecting said electrical contact from mechanical contact when the electronic module is not plugged into the holding structure, said protective device exposing said electrical contact when the electronic module is plugged into the holding structure such that said electrical contact comes into contact with the electrical contact on the coupling partner;

said protective device including a moving protective element being displaceable relative to said housing and being configured for moving between a first position and a second position;

said electrical contact being protected when said moving protective element is in said first position;

said electrical contact being exposed when said moving protective element is in said second position;

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

said moving protective element moving from said first position to said second position when the electronic module is plugged into the holding structure;
and

at least one spring element for holding said moving protective element in said first position in an unplugged state, said spring element allowing said protective element to move into said second position counter to a spring force during said plug-in operation.

23. and 24. (Cancelled).

25. (Previously Presented) The module according to claim 22, wherein said protective element is a flat protective tongue that is displaceable longitudinally relative to said housing.

26. (Previously Presented) The module according to claim 25, wherein at least part of said protective tongue has a circumferential concave profile for mechanically guiding said spring element on said protective tongue.

27. (Previously Presented) The module according to claim 22 further comprising:

at least one spring element for holding said moving protective element in said first position in an unplugged state;

said spring element allowing said protective element to move into said second position counter to a spring force during said plug-in operation.

28. (Previously Presented) The module according to claim 27, wherein said spring element is formed integral with said housing.

29. (Previously Presented) The module according to claim 27, wherein spring element is a separate part that is mounted on said housing or inserted into said housing.

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

30. (Previously Presented) The module according to claim 22, wherein said moving protective element includes a stop element for mechanically contacting the coupling partner during said plug-in operation such that said moving protective element is moved into said second position and said electrical contact is exposed.

31. (Previously Presented) The module according to claim 30, wherein:
said moving protective element includes an end with an angled-away part forming said stop element;
and
said angled away part is a first part of said moving protective element touched by the holding structure during said plug-in operation.

32. (Previously Presented) The module according to claim 22, wherein said moving protective element is moveable into itself and has an end connected firmly to said housing.

33. (Previously Presented) A plug-in electronic module for plugging into a holding structure having a coupling partner with an electrical contact, the electronic module comprising:
a housing;

an electronic component configured in said housing;

at least one external electrical contact connected to said electronic component, said external electrical contact configured for contacting the electrical contact on the coupling partner during a plug-in operation in which the electronic module is plugged into the holding structure;

and

a mechanical protective device for protecting said electrical contact from mechanical contact when the electronic module is not plugged into the holding structure, said protective device exposing said electrical contact when the electronic module is

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

plugged into the holding structure such that said electrical contact comes in contact with the electrical contact on the coupling partner;

said protective device including a moving protective element configured for moving between a first position and a second position, said moving protective element being moveable into itself and having an end connected firmly to said housing, and said moving protective element being a foldable element that folds together during said plug-in operation to expose said electrical contact;

said electrical contact being protected when said moving protective element is in said first position;

said electrical contact being exposed when said moving protective element is in said second position;

and

said moving protective element moving from said first position to said second position when the electronic module is plugged into the holding structure.

34. (Previously Presented) The module according to claim 33, wherein:

said foldable element includes a plurality of bars running transversely with respect to a longitudinal direction of the module;

said plurality of bars define a longitudinal side

and

said plurality of bars are connected together for enabling tilting along said longitudinal side.

35. (Previously Presented) The module according to claim 33, wherein said moving protective element is a roll-up part configured for rolling up during said plug-in operation to expose said electrical contact.

36. (Previously Presented) The module according to claim 22, wherein said moving protective element is made of an electrically conductive material.

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

37. (Previously Presented) The module according to claim 22, wherein said moving protective element is made of an insulating material.

38. (Previously Presented) The module according to claim 22, wherein said moving protective element is made of a material that absorbs electromagnetic waves.

39. (Previously Presented) The module according to claim 22, wherein said moving protective element is spaced apart from said electrical contact in a first position

40. (Previously Presented) The module according to claim 22, wherein said electronic component includes an optoelectronic transmitter, an optoelectronic receiver, or an optoelectronic transceiver.

41. (Currently Amended) A method for connecting an electronic module to a holding structure for holding the electronic module, the method which comprises:

providing the electronic module with an electronic component and at least one external electrical contact connected to the electronic component;

providing the electronic module with a mechanical protective device having a moving protective element that protects the external electrical contact from mechanical contact when the electronic module is not inserted into the holding structure;
and

moving the moving protective element against a bias force of a spring element and relative to the external electrical contact when the electric module is plugged into the holding structure such that the external electrical contact is exposed and contacts the electrical contact on the coupling partner, wherein an insertion force is applied to the moving protective element by the holding structure when the electric module is plugged in to the holding structure thereby moving the moving protective element.

Application No. 10/656,601
Amendment After Final dated June 15, 2006
Reply to Final Office Action mailed February 21, 2006

42. (Previously Presented) The method according to claim 41, which further comprises moving the moving protective element relative to at least one spring element interacting with the protective element during a plug-in operation.

43. (New) The method according to claim 41, wherein the moving protective element is received at least partially into a housing of the electronic module when the moving protective element is moved relative to the external electrical contact.

44. (New) The module according to claim 22, wherein the moving protective element is configured to engage a portion of the holding structure, wherein an insertion force is applied to the moving protective element by the holding structure when the electric module is plugged in to the holding structure thereby moving the moving protective element into the second position.

45. (New) The module according to claim 22, wherein at least a portion of the moving protective element is configured to be received within the housing when the electronic module is plugged into the holding structure thereby exposing the electronic contact.